

IN THE CLAIMS

Claims 1-13 (Canceled).

14 (Currently Amended). A process ~~of forming a phase change memory device~~ comprising:

forming a recess having a bottom and a wall; ~~in a substrate, wherein the recess exposes spaced apart first and third active areas, and wherein the recess comprises a bottom and walls;~~

forming an electrically resistive ~~a polysilicon~~ film in the recess to form a heater;

and

treating the ~~polysilicon~~ film to have different electrical ~~a first~~ conductivity at the bottom and ~~a second conductivity at the wall~~ walls; and

forming a phase change material over said wall.

15 (Currently Amended). The process according to claim 14, wherein treating includes implanting the polysilicon film at a first angle and comprises: implanting the polysilicon film at a second angle different from the first angle.

~~first angled doping the polysilicon film that is in contact with the first active area;~~

and

~~second angled doping the polysilicon film that is in contact with the second active area.~~

16 (Currently Amended). The process according to claim 14, wherein treating further comprises doping the polysilicon film to form discrete isolated regions of the second conductivity.

17 (Currently Amended). The process according to claim 14, before treating, further comprising:

forming a temporary material in the recess; and

patterning the temporary material to expose the polysilicon film that is directly above the active areas.

18 (Currently Amended). The process according to claim 14, before treating, further comprising:

forming a temporary material in the recess;

patterning a mask over the temporary material; and

removing a portion of the temporary material to expose the polysilicon film that is directly above the active areas.

Claims 19-34 (Canceled).

35 (New). A method comprising:
forming a recess in a dielectric layer;
forming a heater material over of said recess, said to form a wall including an exposed edge; and
forming a phase change material over said heater material in contact with said exposed edge.

- 36 (New). The method of claim 35 including forming said heater of polysilicon film.
- 37 (New). The method of claim 35 including forming a resistive film by deposition over said recess.
- 38 (New). The method of claim 35 including implanting selected regions of said film to create regions of different electrical conductivity within said film.
- 39 (New). The method of claim 35 including forming said heater material in a U-shape.
- 40 (New). The method of claim 39 including filling said U-shaped heater material with a dielectric material.
- 41 (New). The method of claim 40 wherein said U-shaped heater includes a base and an upstanding wall having said edge spaced away from said base.
- 42 (New). The method of claim 35 including covering said recess and said dielectric layer with said heater material.
- 43 (New). The method of claim 42 including planarizing said heater material.
- 44 (New). The method of claim 43 including removing said heater material from over said dielectric layer.
- 45 (New). The method of claim 35 including forming said recess completely through said dielectric layer.